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JP 9-144239
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Standard Patent

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Gutter cleaning shutter

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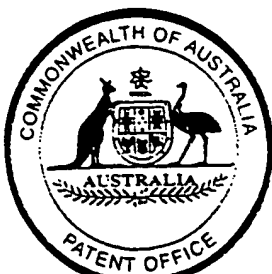
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Dave Herald
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GUTTER CLEANING SHUTTER

A gutter cleaning shutter will provide a quick and relatively easy method of cleaning roof gutters of dirt and rubbish which accumulates in the bottom of roof gutters.

In most instances , cleaning roof gutters is a difficult and onerous task. There is usually insufficient space between the outer edge of the gutter and the edge of the overhanging roofing material to allow easy access for cleaning.

In spite of best intentions ,such as fitting rubbish barriers to gutters ,dirt and rubbish still manage to accumulate in the bottom of the gutters .This accumulation can cause serious problems such as gutter overflow and damage to eaves , as well as gutter corrosion and blockages in the roof drainage system

To understand this invention , reference will now be made to the accompanying drawings and their use.

The invention is a frame made from a durable material (1) fitted with an internal sliding and removable plate (2). The frame is fitted to the ends of gutters (3) in place of the normally fitted gutter stop ends.

The guttering (3), fits inside the frame(1) flush with the bottom of the shutter frame. The frame is attached to the gutter by pop rivets, gutter sealant or other suitable fixing methods.(4)

The sliding plate (2) when fully inserted, closes off the end of the gutter to provide normal gutter operation. When gutter cleaning is required ,the sliding plate(2) is removed, and a down pipe sealing plug (5) is placed in the top of the down pipe inside the gutter. This prevents the rubbish being removed from entering the rest of the stormwater system.

A preferred method of cleaning would be to direct a strong

jet of water from a garden hose along the gutter , propelling the accumulated rubbish towards and out of the open end of the gutter through the open shutter frame.(1) .A net could be used at the shutter end to catch the rubbish

When cleaning is completed the down pipe sealing plugs (5) are removed and the sliding plate (2) replaced in the shutter frame (1) to restore the gutter integrity. Some slight water leakage may occur around the sliding plate during periods of rain, but the amount of leakage would be minimal and of little consequence

The invention is not restricted to the gutter profile shown in the drawings but may be manufactured to fit all gutter profiles. The fixed frame would be manufactured to allow left or right horizontal opening (1) as well as a frame allowing vertical operation.

1. A shutter for an end of a rain gutter of the type having spaced front and rear sidewalls connected together by a base member and suitable for mounting along and under the overhang of a roof of a building and co-operating with at least one downpipe attached to said gutter, said shutter including:
 - 5 a frame adapted to be connected to said end of said gutter, said frame defining an aperture; and
 - a plate adapted to slide within said frame from a closed position which substantially prevents exit of debris collected in said gutter through said aperture to an open position whereby said plate is removable from
 - 10 said frame allowing exit of said debris through said aperture;
 - wherein said frame is adapted not to impede flow of said debris along said base member as said debris is discharged through said aperture.
2. A kit for use in the removal of debris from a rain gutter of the type having spaced front and rear sidewalls connected together by a base member and suitable for mounting along and under the overhang of a roof of a building and co-operating with at least one downpipe attached to said gutter, said kit including:
 - 15 a shutter as defined in Claim 1; and
 - at least one blanking plate adapted to be removably retained in said
 - 20 downpipe to substantially prevent water and said debris from exiting through said downpipe.
3. A method to remove debris from a rain gutter of the type having spaced front and rear sidewalls connected together by a base member and suitable for mounting along and under the overhang of a roof of a building and co-

operating with at least one downpipe attached to said gutter, said method including:

fixing a shutter as defined in Claim 1 to an end of said rain gutter;

removing said plate to said open position;

5 if required, before, simultaneously with or after said removing of said plate, affixing a blanking plate to said downpipe to substantially prevent water and said debris from exiting through said downpipe;

flushing said debris along said base member of said gutter and through said aperture;

10 after said flushing is completed, in any order, returning said plate to said closed position and removing any said blanking plate from said downpipe.

4. A method as defined in Claim 3 which, after said plate has been removed from said frame, further includes:

15 fixing a net over said aperture to collect any said debris as it exits through said aperture; and

removing said net from said aperture before returning said plate to said closed position.

20 5. A shutter substantially as hereindescribed with reference to the accompanying drawings.

6. A method to remove debris from a rain gutter substantially as hereindescribed with reference to the accompanying drawings.

ABSTRACT

A gutter cleaning shutter, made from a durable material, is disclosed. It consists of a rigid frame (1) with an internal removable sliding plate(2) The shutters are fitted to the ends of roof gutters (3) instead of gutter stop ends. The gutter cleaning shutter with sliding plate in place provides normal gutter integrity. Removing the sliding plate provides an unobstructed outlet to enable gutters to be cleaned by propelling accumulated rubbish along the gutter and out through the open shutter frame.. A strong jet of water from a garden hose would be the recommended method of propelling the rubbish during cleaning. Sealing plugs (5) are placed over the tops of downpipes to prevent rubbish falling into the drainage system. When cleaning is completed, sealing plugs (5) are removed, and the sliding plate(2) replaced in the cleaning shutter frame(1), restoring the integrity of the roof drainage system.

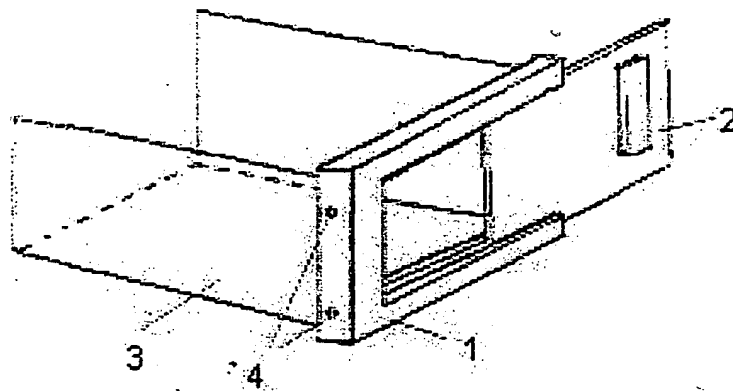


Figure 1

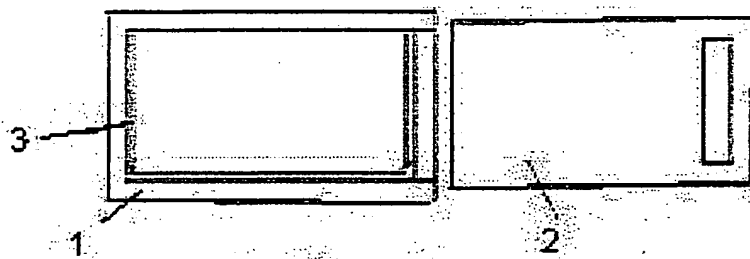


Figure 2

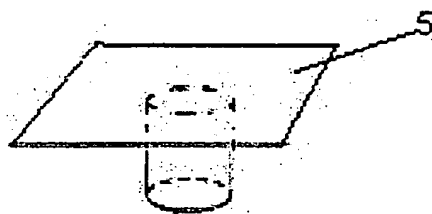


Figure 3

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